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(54) Title: NOVEL NUCLEIC ACIDS AND POLYPEPTIDES

(57) Abstract: The present invention provides novel nucleic acids, novel polypeptide sequences encoded by these nucleic acids and uses thereof.

626	8677	A	1582	2	1296	ALCEPQPFQSGSCVIAJLGRKMFSVAHL ARANPNTPHLQLVHDGLDLRSSSPGP TGKPRRPSQ/HMAAAPVEEQYSCDYSG RFFILCGLGGIISCGTTHALVPLDLVKIC RMQVDPQKYKGNFNGFSVTLKEDGVAR GLAKGWAPTFLGYSMQGLCKFGFYEVF KSLAYSNMLGEVENTYL*RTSLYLAASAS AEFFADIALAPMEAAKVRIQTQPIGYANT *EGISFPKCIKEEGLTSILQGGLPLWMR QIPYTMN*SSPCLERTVEALYKFVIVPK PRRE*FKRQSRLLVVTIW*QVTIARVFCAN CFSPLPEFLG*PVLG*GKKVSQCFLVWLQ RDLGFKGVWVKGLFARIMIGTLTALQ WFIYYSVKGYFRULPRPPPEMQESLKK KLGVNSVVRKANCGNLNLLVDPVFEEA KGTFIYLV
627	8678	A	1583	127	433	RPLESWIGLVRNICRSPIAEAVFRKLVT DQNIKNWRVDSAATSGYEIGNPPDYRG QSCMKRHGIPMSHVARQDLNRKSNRV KTCKAKIELLSYDPQKQL
628	8679	A	1584	2	535	
629	8680	A	1585	551	1299	PADPPRPSYYRHRTTPQAHWSRLRRSRL RRRGSHTRCPVGVGAGLRRRAGARLAV RLRASACGTPRCLGASARGKMAEQATK SVLFVCLGNICRSPIAEAVFRKLVTQNI SKN/WEGRQRGNFRWVIDSGAVSDWNV GRSPDPRAVSCLRNHGIHTAHKARQIT KEVFPTFDYILCMDESNLARDLNRKSNR VKTCKS*KFELPWEL*SPQQLIIEDPY GE*LWTLETVYQQCVRCRAFLKHAH
630	8681	A	1586	1	1239	
631	8682	A	1587	298	408	
632	8683	C	1588	92	244	MRCEIILVLIPYVYFYSNKLCSRLXXX XGGAVLKNPWGGQSLPGLAR**
633	8684	A	1589	33	191	RDDPRVRPPNSHT*PQOEPL*LIKCTSP PQAPAPRTVHGPFYFMRLLIKMF
634	8685	A	159	445	673	RECLH*PRMATQRKHLVIDFNAYITCYIC KGYLIKPTTVTECLHT/FCRCMEAFPSLL LA
635	8686	A	1590	3	1285	
636	8687	A	1591	3	3469	QPGHTIYLLPTVVICNLLPCELDYFVKGM PINGTLKPGKEAALHTADTSQNIELGVSL ENFPLCKELLIPPQTQNYMVRMLYDVN RRQLNLTRIVCRAEGSLKIFISAPYWLIN KTGLPLIFRODNAKTDAAGQFEEHELAR SLSPLLFCYADKEQPNLCTMRIGRGIHPE GMPGWCQGSLDGGSGVRALKVIQGN RPGLIYNIGIDVKKGRGRYIDTCMVIFAP RYLLDNKSSHKLAFQAQREFARGQTA
637	8688	C	1592	398	655	MMFPLAFSLPLKNAFHISVCRVCPGYTG FAKRALTALNLDTSLSANCCNTPPAEXP NVHNPCYMGLSKPARXSKLGSCKGSS XH*
638	8689	A	1593	1	930	
639	8690	A	1594	1	134	

640	8691	A	1595	3	2455	HASVCPAVGVQRLCLFPCVSLQALFMGS PLRFDGRFFLVGTGAGAGLGRAYALAF ERGA LVVVNDLGGDFKGVKGSLAADK VVEI RRRGGKAVANYDSVEEGDKVVK TALDAFGRIDVVVNNAGILR/DINSFARIS DEDWDIIHRVHLRGSFQVTPAAWEHMK KQKYGRSMTSSASGIYGNFGQANYSA KLGLGLANSLAIEGRKSNHWNITAPNA GSRMTQTVMPEDLVEALKPKYVAPLVL WLCHQSCEENGGLFEVGAGRIGKLRWE RTLGAIVRQKNHPMTPEAVKANWKKIC DFENASKPQSIQESTGSIIEVLSKTDSEGG VSANYTSRATSTATSGFAGAIGQKLPPFS YAYTELEAIMYALGVGASIKDPKDLKFI YEGSSDFSLPTFGVIIGQKSMGGGLA EIPGLSINFVKVHLHGEQYLELYKPLPRAG KLKCEAVVADVLDKSGGVVIMDVYSY SEKELICHNQFSLFLVSGGGFGGKRTSDK VKVAVAI PNRPDAVLTDTSLNQAA RLSGDWNPLHIDPNFASLAGFDKPIHLG LCTFGIFCQGVLLQQFCR*MDVVQGFKG N*RARFAKPVYPGANFYQT*ECWKEIG NRNSFFKPKVQGNLETLVSKWHMWDL GTQHSGYFLRTPSEGGPSFRVPLVFEET GRRLKDIGPEVVVKVNAVFEWHITKG GNNGAKWTIDKISGSWEKLYQGGS/KK GAADTIH/ILSDEDFLWEVVLGQA*PSR KAFFSGPG*RPQGGTSMA*AQKLSDGFL KDYAKLLKGTPTLLIKMESIKIPPHQIC LDYSAKS
641	8692	A	1596	2	289	
642	8693	A	1597	1	397	
643	8694	A	1598	1	410	STMISPVILFSSFLCHVAIAQRTCPKPD LPFSTVPLKTFYEPGEEITYSCKPGYVS RGGMRKFICPLTGLWPINTLKCTPRVCP FAGNLRKMGAVRLITDFLNYSPTRFSL LTWGFLEWALDSAKCIEGG
644	8695	A	1599	19	1215	CQCDSSMIFSRCSLSSFLCHVAIAQRT CPKPDLLPFSTVPLKTFYEPGEEITYSC KPGYVSRGGIEESLSCPLATGTGVPFNTSG NVTPRVCPFA GIFRKMGGRTLITTF*NYP NTDPVFSLLTLGF*FWNGALDFWPSCTG GKGKWSPELPGLVAPIINCPAPSIP/TGFA TLHVLLRPFRLGNNSPPIGDTAVFECLAH NMAMFGNDTITCTTHGKLDLNYPECR GSKMPPFPHQDPDNGIW*TYPCQNPNTL FTRVKAPHLGLPHDGIFSGMGPRKENE *PQTWGKPGSWPLAPSW*KPSLVKGT KKRPTVV/YPQGERVKDSREKFKEWECL HG**KFLSFCKNKEKKCSYTEDAQCIDG TIEVPKCFKHEHSSLAFWKTDASDVKPC
645	8696	A	16	3	145	SSSSSDFAGQTL*STQTVQN*FKKVLKPG RLYPVPIATMGIKEPLIS
646	8697	A	160	22	849	WIERDLNLCIKRLK/PTTNNMLNDEIVNIS PKIIRQGYLLSMILFGIVQKDLTRKLM QGRETGIEIRKEVKL*KRKRJ*ISICRCH E*IW*VPCIKVMQAFYDIPAKNMENEIL KKQCHF KDPSSA*REKMRILCFEELYPEN KITKEERDR/RRTISKLLLPKFHLQP*NP RQVSLMLN*QANF*EFICIFQKSKIVKAI L*NGQRLKFLNIKT CYKAIEIMKVLIWH KDVKLD*WNSIQVSKVDPRVYHHSFE KGDIEV*WGKGCSFQ
647	8698	A	1600	1	282	

648	8699	A	1601	1	453	EFGSQQLGRREEWQRQGSVSRRLSARR GPQAPGTRLPRRHPARAPPAATMPKRKV SSAEGAA*LEPNRSARLSAKPPAKGEA KPKKAAAKDKSSDKK\WQTKGKRGAKG KQAEVANQETKEDLPAENGETKTEESP\ ASDEAGEKEAKSD
649	8700	A	1602	146	824	TWKGKDPKKPRGKMSSYAFFVQTCREE HKKKHPDASVNFS/ESFSKKCSERWKT SA*R/EKGKFEDMAKADKARYEREMK TYIPPQRGRQKRKFKDSQLHPRGPPSGLL SSSCSEYRPKIK\GEHP\GLSIGDVAKKLG RDVGINTAAD\DKQPYEKK\AAKLKEY EKDIAAYRAKGKPDAAKKG\VVKAES KKKKEEEDEEEGDEDEEEDEEED DEEEDER
650	8701	A	1603	1	223	
651	8702	A	1604	1	400	FADD/PSDK/FFTNNGMQFSTGHNDND KFEGNCAEQDGSWWMNKCHAGHLNG VYYQGGTYSKASTPNGYDNGI\WATWK TRWYSMKKT\TMKIIPFNRLTIGEGQHH LGGAKQVRPEHPAET\YDSL\YPEDDL
652	8703	A	1605	18	365	NILIKVYFNSKNDFKIFHEFFKQNYMKN MYKSVINVIDIFMNFQ/SEKYPII/DKGS LNK*MLTILALKSNTT\RLIRD\AFYYVR EHIINVSSKRARYWVCVGF\ASC*QPPL F
653	8704	A	1606	212	1645	HYKARSSGHS\DIMSWSLHARNLILYFY ALLFLSSTCVAYVATRDNCC\LYERFGC YCPTTCGIADFLSTYQTRVD*DLQSLAED ILHQVENKTS\EVKQLIKAIQ\TYNPD\ES SKPNMIDAATLKSRKMLEEIMKYEASVL THDSSIRYLQEI*FQIIQIVNLKEKVAQ LEAQCQEPCKDTVQIHDITGKDCQDIAN KGAKQSGLYFIKPLKANQQFLVYCEIDG SGWGWTVFQKRLDGSVD\FKKNWIPYK EGFGHLSPTGTTEFLAGEMRKIHF*GTQ SAIPYGI*GVGTGKTWEWARNQYCRSM PLFKVVHEVDKYRFTYAYFAGGDAEDA FDGYDFGDDPSDKFFHIPIMAMQFTYLG TMDNDKV*KANCA*/QQGWDPGWWDG NKC\HAGHSSMGVLFTQGWALYFQKAS YLPNGLWIMGI\WATWK\TRWVFR*RKP TMKIIPFNRLTIGEGQHH\LGGSQTGLE TF
654	8705	A	1607	2	529	GTVAACGACYWLLGLMAVRASFENNCE IGCFAKLNTYCLVAIGGSENFYSVFEGE LSDTIPVVHASIAGCR\IGRMCMVGTTEEIL ADVLKVEVFRQTVADQVLVGSYCVFSN QGGLVHPKTSIEDQDESSLQVPLVAG TVNRGSEVIAAGMVVNDWCAFCGLDTT STELSVVE
655	8706	A	1608	18	889	GVQGTVAACGACYWLLGLMAVRASFE NNCEIGCFAKLNTYCLVAIGGSENFYS VFEGELSDTIPVVHASIAGCR\IGRMCMV GNR\HOLL\VPNN\TTDQEL\QHISATGLP RHSGRFRAGWKERFSLWGNFFNL\LAID YVGLGSNQD\LDKGRQEEISGQMLFKGW EVFRQTVADQVLVESYCVFSNPGRAW VPSRPFQ*RPRNELSSISFKVPLVAGTC* TKGSEVICLLGMGGEMNWCAFCGPGTP NPAQSCQVVEELQS*NEAPALAPIANR ACGNSL\DSL
656	8707	A	1609	1	248	GPLIWEWPASPEPPPLPWGKPRMQ/SG*Y G*TP*IPKIRFPKPFPPFPQALEPQQKGP N*AHP*EPTPAKKYSPQRVQKVPK

WHAT IS CLAIMED IS:

1. An isolated polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1-8051, a mature protein coding portion of SEQ ID NO: 1-8051, an active domain of SEQ ID NO: 1-8051, and complementary sequences thereof.
2. An isolated polynucleotide encoding a polypeptide with biological activity, wherein said polynucleotide hybridizes to the polynucleotide of claim 1 under stringent hybridization conditions.
3. An isolated polynucleotide encoding a polypeptide with biological activity, wherein said polynucleotide has greater than about 90% sequence identity with the polynucleotide of claim 1.
4. The polynucleotide of claim 1 wherein said polynucleotide is DNA.
5. An isolated polynucleotide of claim 1 wherein said polynucleotide comprises the complementary sequences.
6. A vector comprising the polynucleotide of claim 1.
7. An expression vector comprising the polynucleotide of claim 1.
8. A host cell genetically engineered to comprise the polynucleotide of claim 1.
9. A host cell genetically engineered to comprise the polynucleotide of claim 1 operatively associated with a regulatory sequence that modulates expression of the polynucleotide in the host cell.
10. An isolated polypeptide, wherein the polypeptide is selected from the group consisting of:
 - (a) a polypeptide encoded by any one of the polynucleotides of claim 1; and
 - (b) a polypeptide encoded by a polynucleotide hybridizing under stringent conditions with any one of SEQ ID NO: 1-8051.
11. A composition comprising the polypeptide of claim 10 and a carrier.
12. An antibody directed against the polypeptide of claim 10.

13. A method for detecting the polynucleotide of claim 1 in a sample, comprising:
- a) contacting the sample with a compound that binds to and forms a complex with the polynucleotide of claim 1 for a period sufficient to form the complex; and
 - b) detecting the complex, so that if a complex is detected, the polynucleotide of claim 1 is detected.
14. A method for detecting the polynucleotide of claim 1 in a sample, comprising:
- a) contacting the sample under stringent hybridization conditions with nucleic acid primers that anneal to the polynucleotide of claim 1 under such conditions;
 - b) amplifying a product comprising at least a portion of the polynucleotide of claim 1; and
 - c) detecting said product and thereby the polynucleotide of claim 1 in the sample.
15. The method of claim 14, wherein the polynucleotide is an RNA molecule and the method further comprises reverse transcribing an annealed RNA molecule into a cDNA polynucleotide.
16. A method for detecting the polypeptide of claim 10 in a sample, comprising:
- a) contacting the sample with a compound that binds to and forms a complex with the polypeptide under conditions and for a period sufficient to form the complex; and
 - b) detecting formation of the complex, so that if a complex formation is detected, the polypeptide of claim 10 is detected.
17. A method for identifying a compound that binds to the polypeptide of claim 10, comprising:
- a) contacting the compound with the polypeptide of claim 10 under conditions sufficient to form a polypeptide/compound complex; and
 - b) detecting the complex, so that if the polypeptide/compound complex is detected, a compound that binds to the polypeptide of claim 10 is identified.
18. A method for identifying a compound that binds to the polypeptide of claim 10, comprising:

a) contacting the compound with the polypeptide of claim 10, in a cell, under conditions sufficient to form a polypeptide/compound complex, wherein the complex drives expression of a reporter gene sequence in the cell; and

b) detecting the complex by detecting reporter gene sequence expression, so that if the polypeptide/compound complex is detected, a compound that binds to the polypeptide of claim 10 is identified.

19. A method of producing the polypeptide of claim 10, comprising,

a) culturing a host cell comprising a polynucleotide sequence selected from the group consisting of a polynucleotide sequence of SEQ ID NO: 1-8051, a mature protein coding portion of SEQ ID NO: 1-8051, an active domain of SEQ ID NO: 1-8051, complementary sequences thereof and a polynucleotide sequence hybridizing under stringent conditions to SEQ ID NO: 1-8051, under conditions sufficient to express the polypeptide in said cell; and

b) isolating the polypeptide from the cell culture or cells of step (a).

20. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 8052-16102, the mature protein portion thereof, or the active domain thereof.

21. The polypeptide of claim 20 wherein the polypeptide is provided on a polypeptide array.

22. A collection of polynucleotides, wherein the collection comprises the sequence information of at least one of SEQ ID NO: 1-8051.

23. The collection of claim 22, wherein the collection is provided on a nucleic acid array.

24. The collection of claim 23, wherein the array detects full-matches to any one of the polynucleotides in the collection.

25. The collection of claim 23, wherein the array detects mismatches to any one of the polynucleotides in the collection.

26. The collection of claim 22, wherein the collection is provided in a computer-readable format.

27. A method of treatment comprising administering to a mammalian subject in need thereof a therapeutic amount of a composition comprising a polypeptide of claim 10 or 20 and a pharmaceutically acceptable carrier.

28. A method of treatment comprising administering to a mammalian subject in need thereof a therapeutic amount of a composition comprising an antibody that specifically binds to a polypeptide of claim 10 or 20 and a pharmaceutically acceptable carrier.